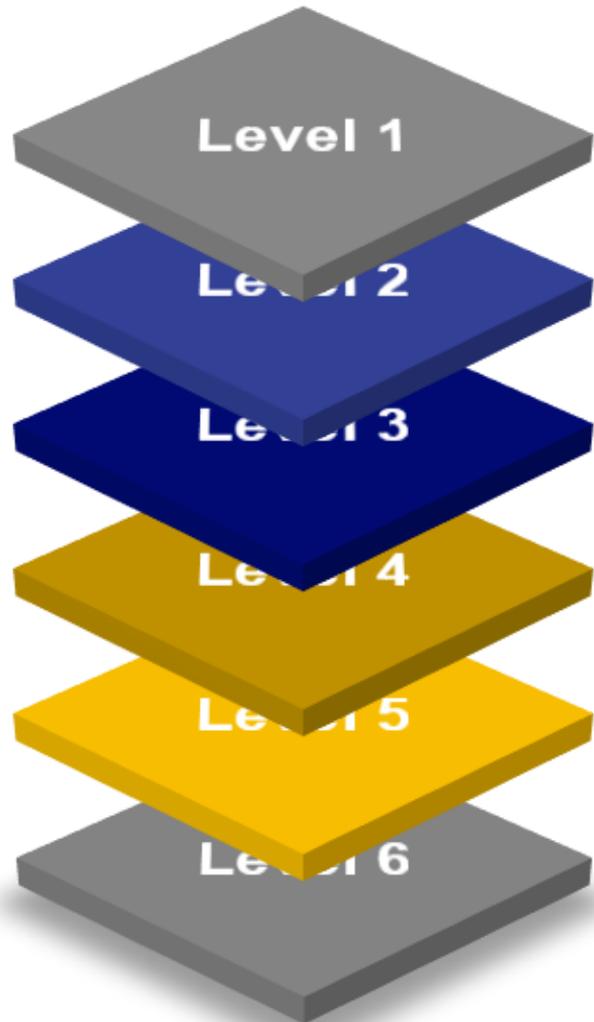


# [Tarin Group]

Short-Post #2: Deep Dive

February 2026

## A six-layer analytical framework combines quantitative and qualitative methods to generate investment insights for AI-Driven home furnishing companies



**Summary & Scope: Insights, Dates, Data, etc.**

Slides 2-3



**Qualitative Linkage: Defining the AI Group**

Slide 4



**Quantitative Linkage: Direction & Magnitude**

Slides 5-7



**Multi-Linear Regressions: Deep Dives, AI vs. Traditional**

Slide 8



**Insight Generation: AI Risk & Reward**

Slides 9-12



**Considerations: The AI Advantage**

Slide 13

## Short-Post #2 Key Insights

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- 1 Multi-linear regression analysis suggests that, relative to their Traditional counterparts, the AI Group is better positioned to convert both AI sector-specific and overall market tailwinds into earnings, exhibiting 88% and 44% greater returns, respectively
  - 2 Risk analysis results suggest the existence of a structural difference between the volatility profiles of our AI Group and the Traditional Group, where the AI Group is 40% less asymmetric to shocks and experiences 27% lower shock intensity
  - 3 Return analysis results suggest the AI Group saw higher average cumulative returns during seasonal headwinds and after Q3 2022, saw significantly higher rolling S&P excess returns with lower volatility compared to the Traditional Group
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## Analysis Scope

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Geographic Scope: US data

Data Sources include: S&P Capital IQ

Timeframe: Jan. 1, 2016 – Dec. 31, 2024

AI Group: group of 5 leading home furnishing companies that leverage AI for their business.

Traditional Group: group of 7 comparable leading home furnishing companies that minimally leverage AI for their business.

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**Qualitative Linkage: Summary**

**The Tarin Group’s qualitative analysis portion for identifying AI-Driven Retailers (home furnishings sector) within our sample is guided by the established ways in which AI has been leveraged within consumer sector businesses**



**AI-Driven Retailer**

Leverages:

Customer Data & Real-Time Insights	Personalized Marketing	Predictive Pricing & Demand	Service Automation	Supply-Chain & Inventory	Ecommerce & Augmented Reality	Sales Workflow	Product & Merchandise Intelligence
<i>Real-time customer behavior data drives personalized engagement strategies</i>	<i>Personalized, omnichannel marketing campaigns, targeting customers at the right point in their journey</i>	<i>Algorithms optimize prices dynamically based on demand and market trends</i>	<i>Enhance customer service experience with automation and personalized responses</i>	<i>Machine learning forecasts demand to efficiently optimize inventory</i>	<i>Virtual try-ons and recommendations boost online conversion rates</i>	<i>Automated tools streamline sales processes and reduce friction in the sales process</i>	<i>Customer feedback analytics &amp; insights inform product development and merchandising</i>

\*Group of 5 AI-Driven Home Furnishing Companies

\*\*Group of 7 Comparable Traditional Home Furnishing Companies

# Quantitative Linkage establishes a differentiated AI index to proxy for isolated AI sector market movements

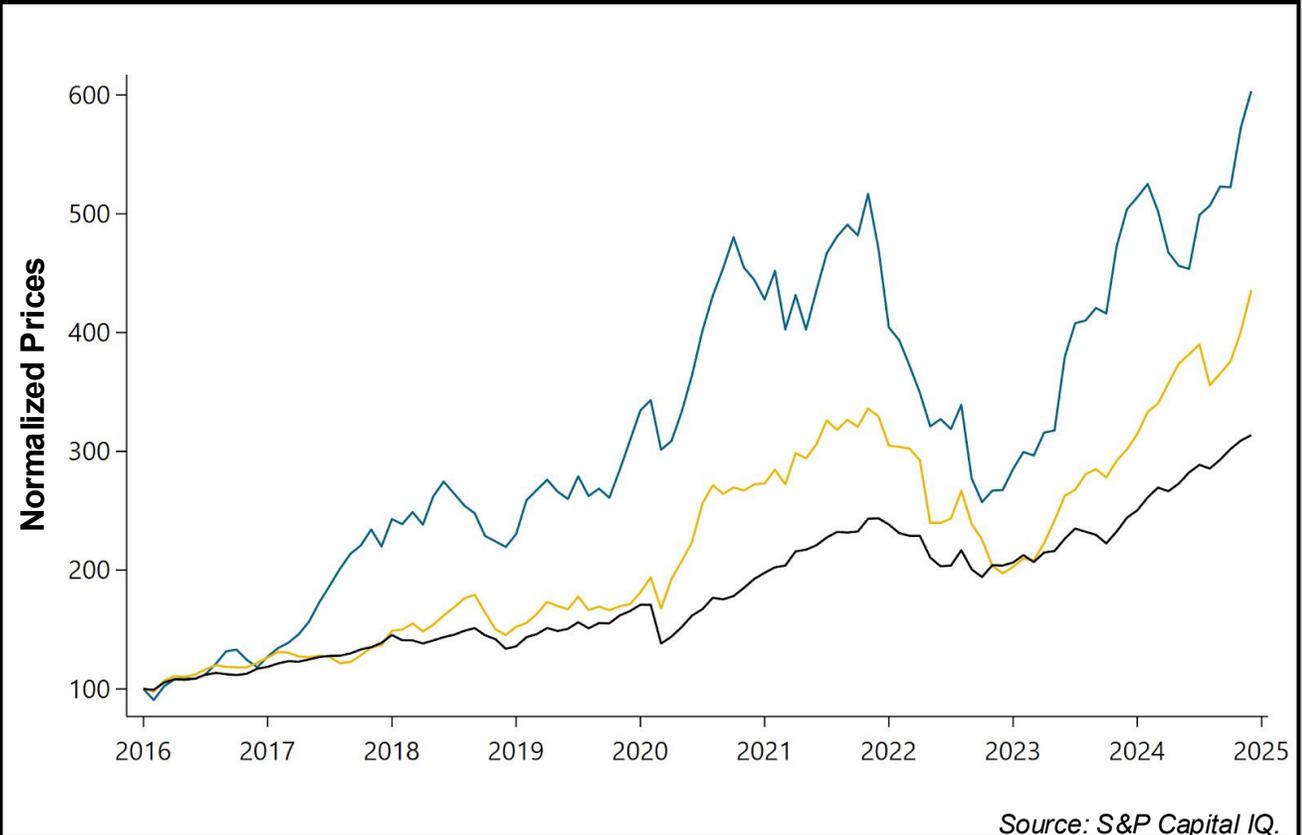
**AI index demonstrates meaningful differentiation from the S&P 500 / general market.**

Only ~45% of shared variance between AI index and S&P 500, meaning that more than half of the AI index's movements are distinct from broad market moves

**AI Index demonstrates meaningful differentiation from the general tech index**

Only ~48% of shared variance between AI index and tech index, meaning that more than half of the AI index's movements are distinct from general technology sector moves

Indices: AI vs. Tech vs. S&P



■ = AI Index   ■ = Tech Index   ■ = S&P Index

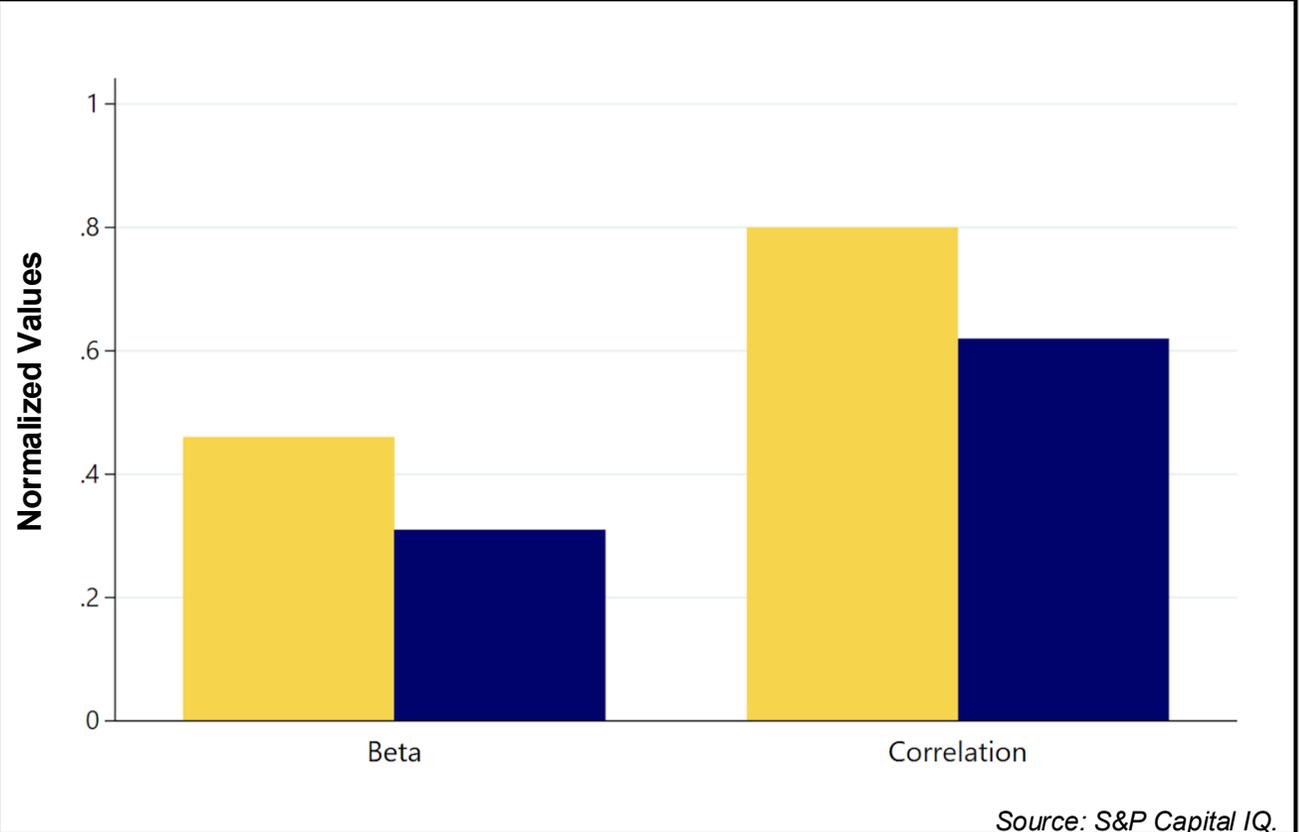
**Quantitative Linkage uses AI index to reaffirm Qualitative Linkage results and identifications**

*Relative to each group's own baseline market correlation, the AI Group tracks AI sector dynamics ~30% more closely than the Traditional group*

*The AI Group demonstrates 67% higher explained variance from AI index movements compared to the Traditional Group (0.64 vs 0.38), confirming distinct AI exposure*

**Relative to each groups' own baseline market beta, the AI Group exhibits ~45.5% normalized sensitivity to AI sector variation vs. ~31.5 for Traditionals (44% higher for AI Group)**

**AI Group vs. Traditional Alignment with AI Index**

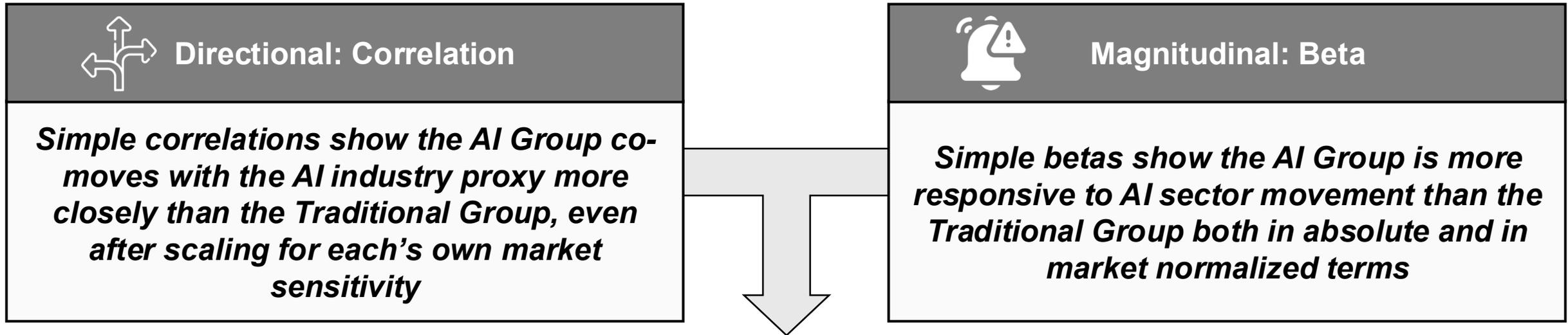


**■ = AI Group      ■ = Traditional Group**

*Note: Using daily trading data from 2016-2024, AI Index beta & correlation for each group was divided by their respective S&P Index beta & correlation to obtain normalized values*

## Correlation (Direction) and Beta (Magnitude) findings further confirm AI Group's distinct relationship and exposure relative to Traditional counterparts

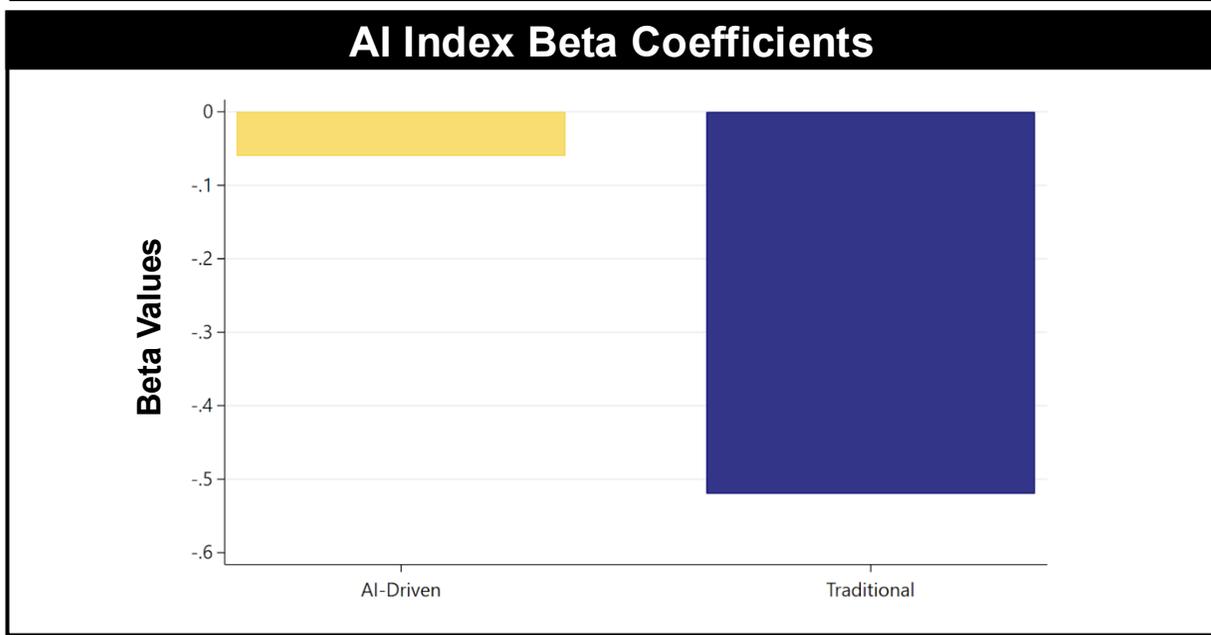
*As shown, the AI Index is distinct from S&P and Tech indices, and the AI Group measurably aligns more closely to this AI Index than the Traditional Group. With this Quantitative Linkage established, we can dive deeper into the AI Group vs. Traditional Group to uncover key Risk & Reward profiles for AI-Driven and the Traditional Furnishers.*



***The AI Group exhibits more positive, strong, and distinct AI exposure relative to Traditional counterparts***

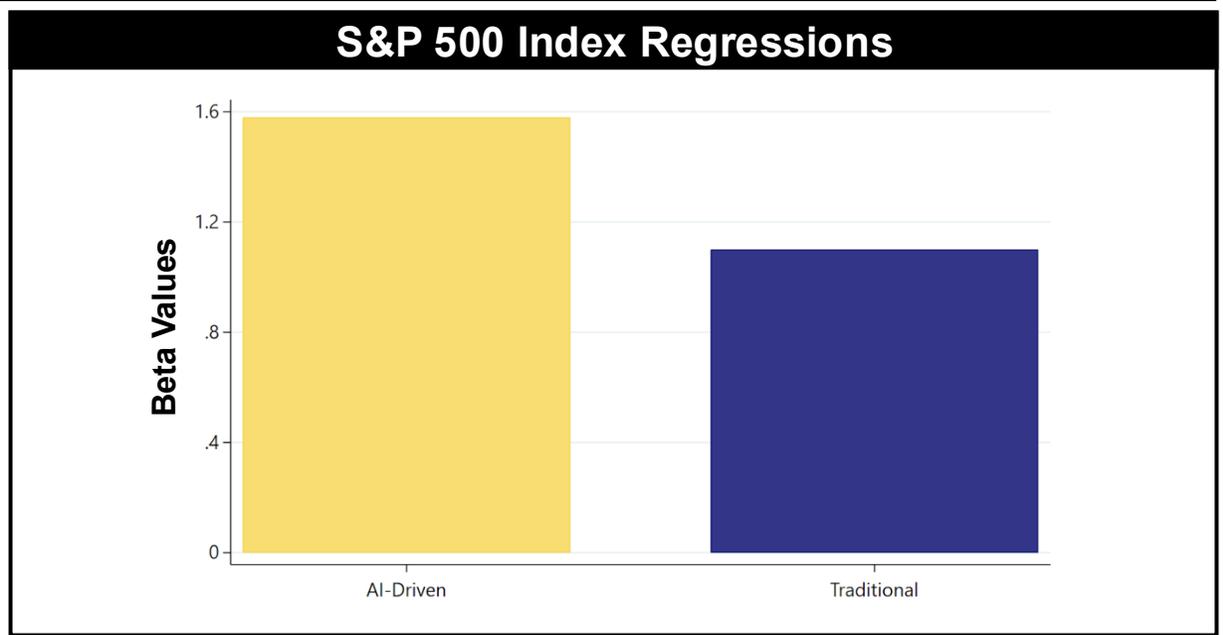


# Controlling for market, size, and time, AI-Driven furnishers benefit more from AI sector growth and exhibit greater upside to S&P 500 growth versus Traditional peers



Source: Capital IQ.

**AI-Driven Group is not left behind as the AI sector grows, reflecting ~88% greater downside insulation vs. Traditional peers during AI sector expansions**



Source: Capital IQ.

**AI-Driven Furnishers benefit more from broad risk-on market environments showing ~44% higher returns as S&P expands**

**The AI Group is positioned to convert secular AI tailwinds and broad cyclical upswings significantly better than its Traditional counterparts**

This risk analysis will use a three-pronged methodology to measure & model furnisher reactions to market shocks over time, and assist in identifying potential structural differences between the AI and Traditional Group's volatility profiles



### Immediate Past Shocks

Proxy

Autoregressive Conditional Heteroskedasticity (ARCH) models allow us to measure **short-run shock sensitivity**.

Results

*AI Group is 27% lower on shock intensity.*

*AI Group's volatility is less dominated by day-to-day headlines.*



### Memory Past Shocks & Past Volatility

Generalized Autoregressive Conditional Heteroskedasticity (GARCH) models allow us to measure **shock memory**.

*AI Group is 8% lower in terms of volatility memory.*

*AI Group's volatility sticks around for shorter periods of time.*



### Asymmetry Shock magnitude & direction

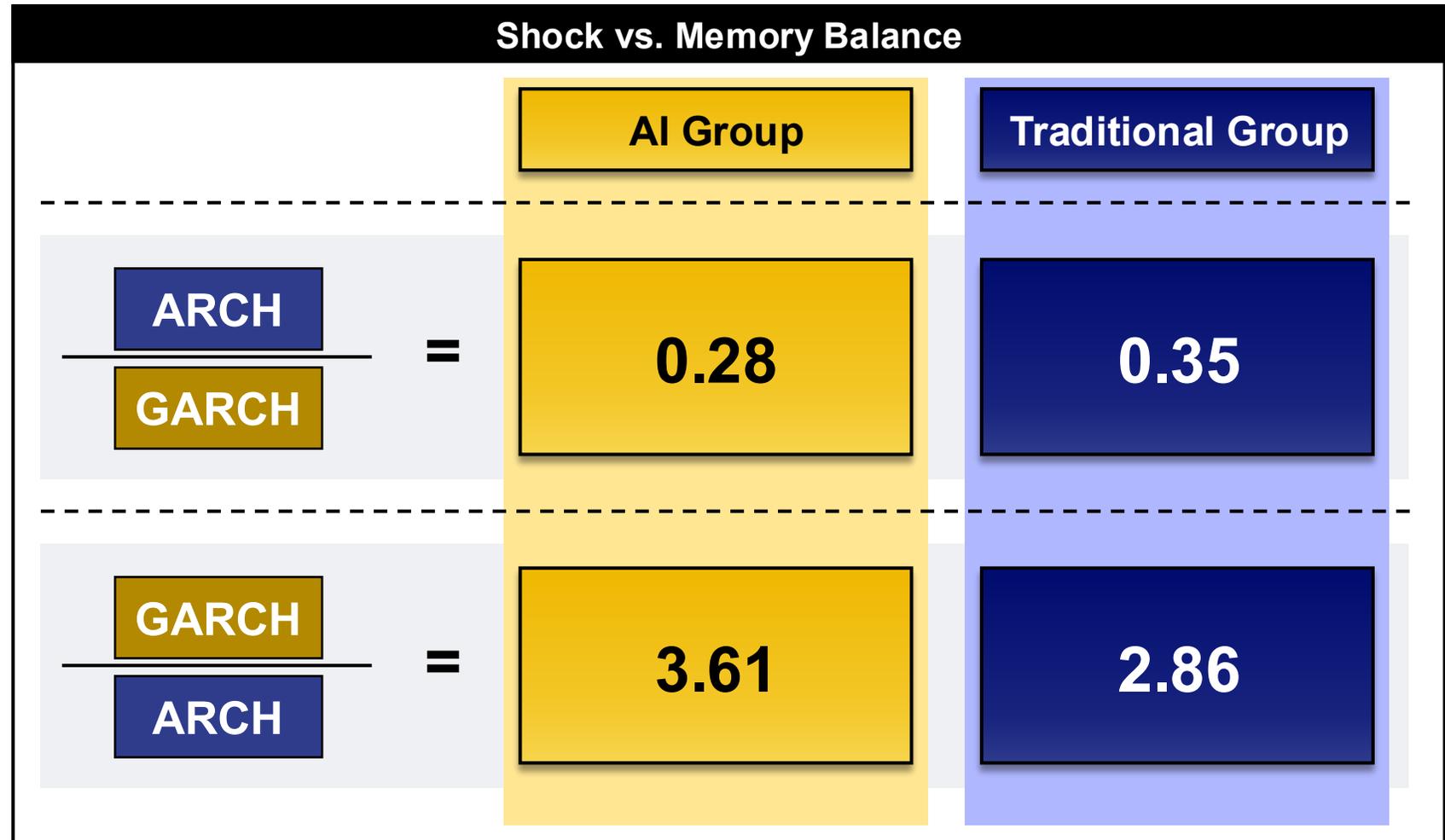
Threshold Autoregressive Conditional Heteroskedasticity (TARCH) models allow us to measure **asymmetry in shock responses**.

*AI Group reacts more symmetrically (40% less asymmetric) to good or bad news.  
There is less downside skew for the AI Group, suggesting fewer panic spirals.*

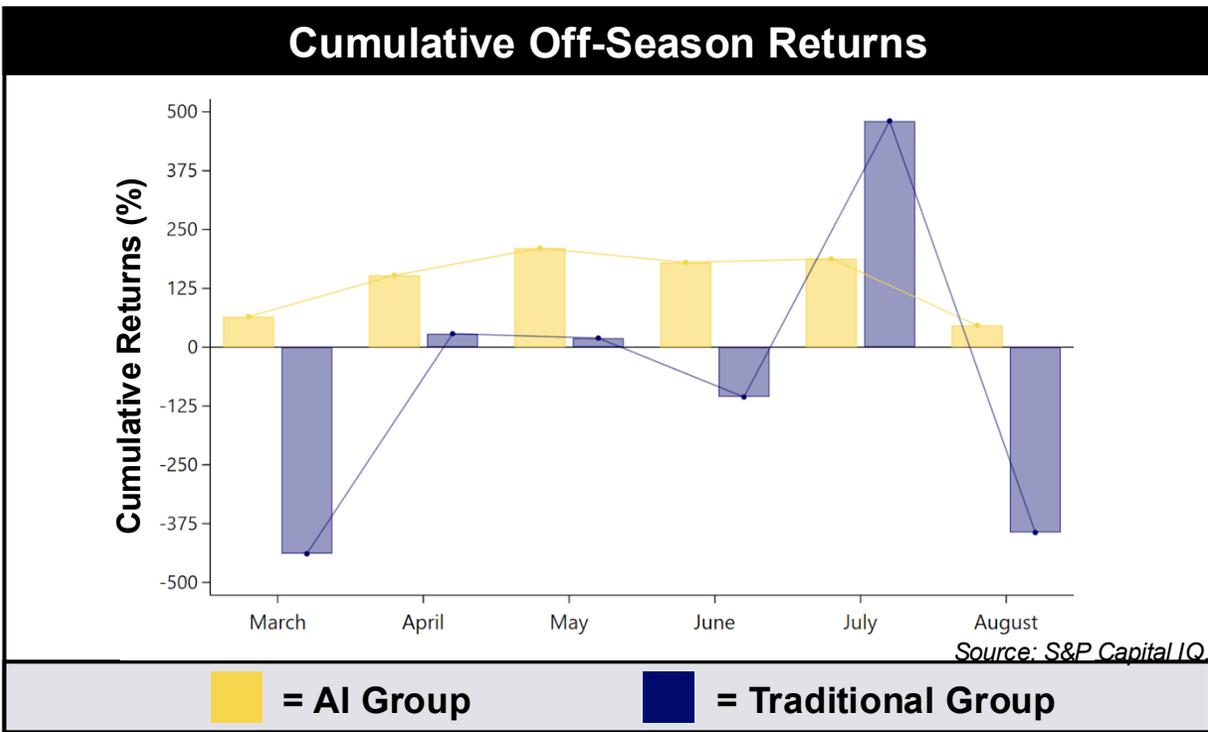
## AI Group's volatility is more memory-dominated (oriented on business fundamentals) and less shock-dominated (responsive to immediate shocks) than the Traditional Group, suggesting structural differences in risk dynamics

Risk for the AI Group appears to be more driven by slow-moving fundamentals (e.g., integration cycles, process improvements, etc.) and less by transitory shocks (e.g., headlines, daily movers, etc.).

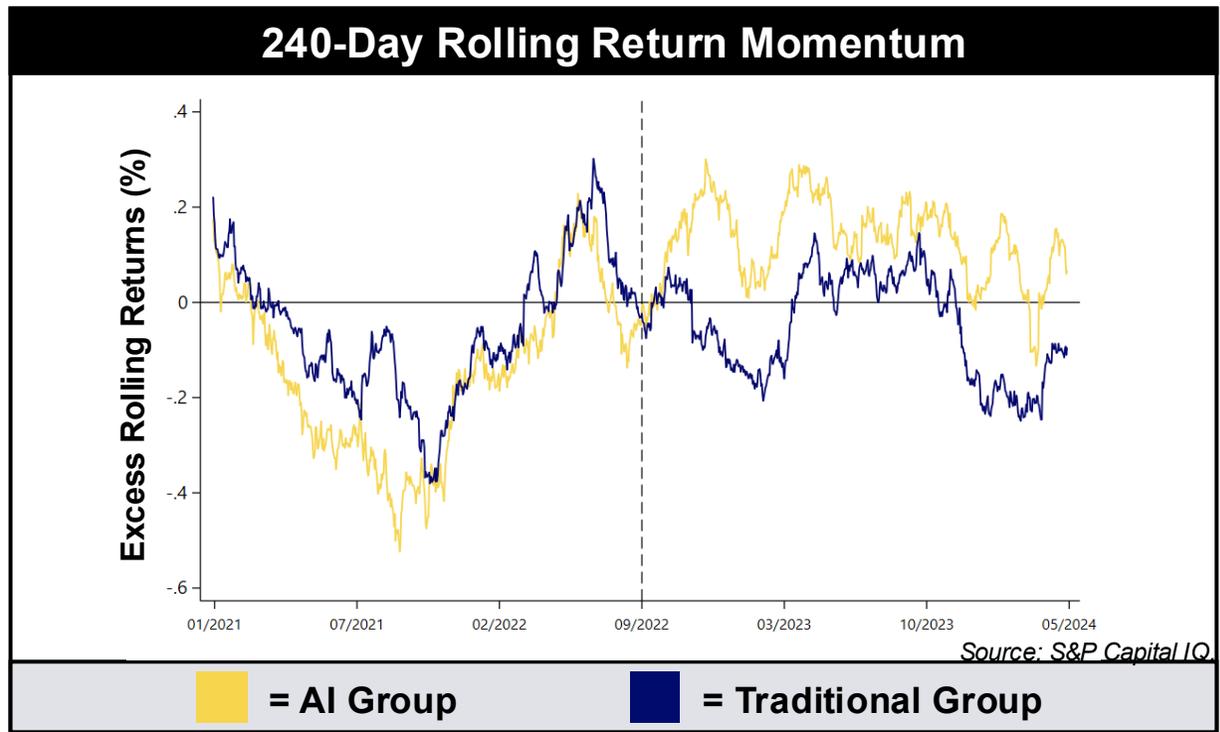
This suggests that investors in the AI Group's constituents are likely running on longer horizon strategies as markets treat the AI Group as having more predictable progress paths relative to the Traditional Group.



# Seasonal & Rolling Excess Return analyses suggest that advantages for the AI Group appear to be fundamental, rather than seasonal or hype-oriented



AI Groups exhibit much higher average cumulative returns with far lower dispersion in these returns compared to the Traditional Group.



Post 9/7/2022, AI Groups flip these rolling excess returns to positive and exhibit less volatility while traditional counterparts remain negative, suggesting benefits were realized as AI integration/adoption scaled. See Appendix for a more detailed look at this period.

Note: Group market cap weighted cumulative, off-season monthly returns and 240-day rolling excess returns relative to S&P.

Data Timeframe: Jan. 1, 2016 – Dec. 31, 2024

## Key Volatility “Risk” Findings

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- 1 Clear **structural differences exist between the volatility profiles** of the AI Group and their Traditional counterparts after analyzing its immediate, memory, and asymmetric volatilities.
- 2 Compared to the Traditional Group, the AI Group exhibits **less downside skew, smaller immediate shock sensitivity, and lower volatility persistence**. AI Group reverts faster and whips around less.
- 3 AI Group’s **volatility is predicated upon slow-moving and long-term business fundamentals**. They are substantially less driven by transient, day-to-day shocks.

## Key Return “Reward” Findings

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- 1 **Off-season (Mar. – Aug.) sales months & performance favors the AI Group**, exhibiting much higher average cumulative returns with lower dispersion **compared to the Traditional Group**.
- 2 September 7<sup>th</sup>, 2022 (Q3 2022) was an inflection point for the AI Group. **Whereafter, the AI Group flips from consistently negative S&P excess returns to consistently positive**.
- 3 **After Q3 2022, the AI Group delivered positive, more stable excess momentum compared to the S&P**, with smaller downside shocks, while the Traditional group delivered negative carry and higher volatility.



## Our Thoughts on the AI Advantage

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**AI furnishers leverage predictive analytics** to identify emerging consumer behaviors and segments **before** they become apparent in traditional metrics, combined with using innovative payment solutions (e.g. **BNPL**) that perfectly align with new deficit-spending consumer profiles.

AI furnishers' success stems from **superior targeting and market expansion** capabilities rather than changing fundamental price perceptions, allowing them to **grow the total addressable market** by **identifying consumers** willing to prioritize furnishings and home investments **despite financial constraints**.

Accordingly, **regression analysis reveals AI-Driven Furnishers exhibit 2.35x greater** sensitivity to furnishing-specific price increases than traditional counterparts, suggesting **their competitive advantage lies in conversion optimization rather than price insulation** – a vulnerability that reflects their success in capturing the more price-elastic, credit-dependent consumer segment that drives their overall market dominance.

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Learn more at  
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Stay tuned for **Short-Post #3 and #4**  
Release Dates TBD

# Short Post #2 Appendix

Additional Analyses

## Post Q3 2022 inflection, we can apply real world events relevant to the “AI Boom” to observe & compare changes in excess return for both the AI Group and Traditional Group

### Vertical Lines Indicate:

1. OpenAI's Initial Release of ChatGPT
2. MSFT & OpenAI extend partnership
3. CRM's Einstein
4. AMZN's AWS AI tools
5. GOOG's PaLM 2
6. NVDA's data center revenue report record

